PB85-232072

# Superfund Record of Decision (EPA Region 2) Friedman Property, Upper Freehold New Jersey, April 1985

(U.S.) Environmental Protection Agency
Washington, DC

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U.S. Department of Commerce
National Technical Information Service
NTIS

United States
Environmental Protection
Agency

Office of
Emergency and
Remedial Response

EPA/ROD/RO2-85/013
April 1985

PB85-232072

EPA

# Superfund Record of Decision:

# Friedman Property, NJ

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## TECHNICAL REPORT DATA
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16. ABSTRACT

The Friedman Property site is located in Upper Freehold Township, Monmouth County, New Jersey and is an open, vacant lot with scrub vegetation. The site is bordered by an unnamed tributary to Lahaway Creek, a single-family residential property, and Routes 537 and 539. Between the late 1950's and the early 1970's the site received bulk liquids and household and demolition debris. Due to impending litigation, information regarding contamination at the site is limited, however, investigations have revealed the presence of pentachlorophenol and other volatile organics in ground water samples.

The selected remedy for the Friedman Property site consists of no action with regard to remediating the low levels of contamination detected at the site, monitoring on-site wells annually for a five-year period, and recommending that the State of New Jersey request the appropriate local authorities to implement deed restrictions on the property. Total capital cost of the selected remedial alternative is estimated to be $60,000.

17. KEY WORDS AND DOCUMENT ANALYSIS

| a. DESCRIPTORS | b. IDENTIFIERS/OPEN ENDED TERMS | c. COSATI Field/Group |
|---|---|---|
| Record of Decision<br>Friedman Property, New Jersey<br>Contaminated Media: none<br>Key contaminants: volatile organics (pentachlorophenol) | | |

| | | |
|---|---|---|
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# RECORD OF DECISION
# REMEDIAL ALTERNATIVE SELECTION

Site: Friedman Property, Upper Freehold, New Jersey

## Documents Reviewed

I am basing my decision primarily on the following documents describing the analysis of cost-effectiveness of remedial alternatives for the Friedman Property site.

- Friedman Property Remedial Investigation/Feasibility Study, Upper Freehold Township, New Jersey.
- Staff Summaries and Recommendations.
- Responsiveness Summary dated September 1984.

## Description of Selected Remedy

- No action with regard to remediating the low levels of contamination detected on the Friedman site.
- Monitor on-site wells, annually, for a five-year period.
- A recommendation that the State request the appropriate local authorities to implement deed restrictions on the property.

## Declarations

Consistent with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), and the National Contingency Plan (40 CFR Part 300), I have determined that the "no-action" alternative combined with precautionary monitoring of the ground water by annually sampling the existing on-site monitoring wells for a five-year period, is the appropriate remedy for the Friedman Property site. Because of the lack of significant contamination at the site, and the lack of evidence that contamination has migrated from the site, these measures are adequate to protect public health, welfare, and the environment. The State of New Jersey has been consulted and agrees with this remedy.

I have also determined that the action being taken is appropriate when balanced against the availability of Trust Fund monies for use at other sites. The "No Action" alternative in conjunction with ground water monitoring will adequately protect public health, welfare and the environment.

Jack W. McGraw

Jack W. McGraw, Acting Assistant Administrator
Office of Solid Waste and Emergency Response

4-30-85
Date

# SUMMARY OF REMEDIAL ALTERNATIVE SELECTION

Friedman Property Site
Upper Freehold, New Jersey

## Site Location and Description

The Friedman Property site is located in Upper Freehold Township, Monmouth County, New Jersey. (See Figures 1 and 2). The site lies just north of the boundary from Plumsted Township at the intersections of Routes 537 and 539. The site is bordered on the southeast by Route 537, to the northeast by an unnamed tributary to Lahaway Creek to the north by a single family residential property and to the southwest by Route 539 (See Figure 3). Development around the Friedman Property consists of commercial, residential and agricultural properties. Several homes and two trailer parks are located within one-quarter mile of the site.

The Friedman property currently exists as an open, vacant lot bordered to the east by scrub vegetation running into a pine and hardwood grove. This field is nearly flat with less than a 1 percent slope toward the northeast.

An approximately 100 foot by 200 foot patch of dense, woody vegetation is found at the southwest corner of the property at the junction of Routes 537 and 539. This dense vegetation covers a surface depression that is approximately six feet lower than the surrounding ground surface. This surface depression receives drainage from the west side of Route 539 and from the south of Route 537. The drainage leaves the depression via a 36-inch diameter corrugated metal culvert pipe that trends north-northeast at a slope of 2.3 percent under the dump site. This culvert runs through the site for 275 feet to its discharge at a marshland where it flows through a small channel for 100 feet to the unnamed tributary to Lahaway Creek.

At the northeast and eastern portions of the site the land increases in slope (approximately 10 feet of relief) forming a wooded escarpment with slopes varying between 10 and 40 percent. This escarpment slopes into a marshland formed by the tributary. The total relief through the study area is 20 feet with an average slope of 3.3 percent.

The geological conditions around the Friedman Site have been generally defined by subsurface investigations of the Goose Farm Site located one mile to the south.

The Friedman Property is located at an outcropping of the western terminus of the Vincetown formation. The Vincetown formation consists of a lower and upper member with the lower member outcropping at the site. This lower member is a greenish-gray, micaceous, clayey, glauconitic, fine to medium sand.

Above the water table the clay is typically eluviated, the lime dissolved, and the green color altered to yellow. The Vincetown formation dips to the east-southeast. The formation is only a few feet thick at its western extent but becomes as thick as 130 feet down dip.

A survey of domestic wells conducted for the Goose Farm Site shows only six wells finished in the Vincetown formation. All these wells yield less than 50 gpm except for one well located three miles south of the Friedman Site that yields 180 gpm.

The Vincetown formation unconformably overlies the Hornerstown formation. The Hornerstown is a massive, green, semiconsolidated medium to coarse-ground, glauconite sand, silt, and clay with interbedded shell layers. The Hornerstown is 30 to 50 feet thick. The low permeability of the Hornerstown makes it a poor aquifer.

Below the Hornerstown formation are the Red Bank Sand and the Navesink formations. Both of these formations combine with the Hornerstown to form a confining layer between the Vincetown and Mount Laurel-Wenonah aquifers and also are poor aquifers.

The Red Bank Sand grades from yellow to red-brown, medium to coarse grained, micaceous sand with partly pyritized lignite, to a dark gray member with micaceous fossiliferous, glauconite sandy clay. The Red Bank can sometimes resemble the Hornerstown and Navesink formations. This formation has an inferred thickness of 15 to 20 feet at the Friedman Site.

The Navesink formation is a greenish-black greensand marl consisting of glauconite and quartz grains filled with calcium carbonate and clay. The Navesink has an inferred thickness of 40 feet at the Friedman Site.

The Mount Laurel-Wenonah formation underlies the confining Hornerstown, Red Bank and Navesink formations at approximately 90 to 100 feet below grade and has an inferred thickness of 90 feet at the Friedman property. The Mount Laurel formation is a glauconitic, clayey to pebbly sand with a distinctive salt and pepper appearance. The top of Mount Laurel is distinguishable from the overlying Navesink formation by a massive shell bed.

The Wenonah formation consists of a silt to medium-grained, yellow micaceous, and chloritic sand. The formation is sometimes interbedded with thin black clays and indurated iron bearing sandstone beds. Lignite and glauconite are present in trace amounts.

The Mount Laurel and Wenonah formations are similar and therefore classified as one hydrologic unit. The aquifer formed by the two formations is an important source of ground water for the majority of domestic wells around the Friedman Site. The average permeability of the aquifer has been reported to be 500 gpd per square foot. The Mount Laurel-Wenonah formation is artesian throughout Monmouth County with the regional piezometric surface sloping southeast.

The greatest potential for human risk due to organic contamination of water supplies appears to be the local domestic wells. All the homes, commercial facilities, and trailer parks near the Friedman Property use well water as their potable water supply. The unnamed stream adjacent to the site flows northwestward into Lahaway Creek from where it flows westward into Crosswicks Creek and eventually into the Delaware River near Trenton. As far as is known, surface water leaving the site is not used as a direct source of potable water anywhere along the route to the Delaware River.

Prior to August of 1983, limited information was available on the nature and extent of dumping activities at the Friedman Property. It is known that the dumping of bulk liquids, household, and demolition debris occurred at the site at various times between the late 1950s and the early 1970s. Shortly after the site was identified in February 1980, public input was solicited, and affidavits were obtained from those actually familiar with and involved in the dumping activities. However, due to impending litigation concerning the Friedman Property, access to this information and to the files of the New Jersey Department of Environmental Protection (NJDEP) was restricted. The only reportable information existing prior to August 1983, on the potential for hazardous substances at the Friedman Property comes from:

1. A NJDEP testing program which made a preliminary assessment of the dangers posed by past disposal practices.

2. A USEPA RIT investigation by Fred C. Hart Associates to make a preliminary study of potential toxics.

The results of these investigations indicated that high concentrations of metals were found in the water from the site monitoring wells. Pentachlorophenol, bis-(2-chloroethoxy) methane and 1-2 trans-dichloroethylene were found in the ground water at the site. Also, the sediments in the feeder streams to the tributary to Lahaway Creek contained traces of base/neutral extractable organics. This group of base/neutral extractables may have been the result of site dumping activities or other off-site activities. Table 1 indicates the results of the USEPA FIT investigation of the Friedman Property conducted in 1981.

The Friedman Property was one of fourteen original Superfund sites designated in New Jersey. A Cooperative Agreement between USEPA and NJDEP was signed in September 1982, for the funding of a Remedial Investigation/Feasibility Study (RI/FS) at a total cost of $270,000. Subsequently, the NJDEP procured a consultant to undertake the work necessary to complete the RI/FS.

## CURRENT SITE STATUS

The site investigation program undertaken as part of the remedial investigation phase included the following components:

1. Drilling and installation of six monitoring wells.
2. Excavation of two trenches and four test pits on site.
3. Drilling of two soil borings.
4. Collection of soil, waste, ground water, surface water and stream sediment samples.
5. Installation of two geodetic monuments and preparation of site maps.
6. Preparation of waste inventory.

The investigation indicated a pattern of contamination at the site consistent with its use for disposal of household and demolition debris. In addition, the investigation indicates that the site has not resulted in significant contamination by organic or inorganic priority pollutants of the air, ground water, surface water, or stream sediments. Table 2 includes the analytical results of the remedial investigation sampling activities. A more detailed discussion of the remedial investigation activity results is included below.

### Air Monitoring Results

During the course of the field investigations conducted at the site, air quality, as monitored by a HNU photoionizer and explosimeter, remained at ambient levels across the site. In addition, there has been no history of complaints concerning odors, fumes or airborne irritants emanating from the site, during the digging of test pits and drilling of monitoring wells. No odors or fumes were detected by personnel working at the site. The lack of airborne contamination is further substantiated by the low levels of volatile organics found in the site soils. Based on this information, the air migration route is not carrying contaminants from the Friedman property to the adjacent community and is, therefore, not considered a pathway for contamination.

## GROUNDWATER SAMPLING RESULTS

### Shallow Aquifer

The results of chemical analysis of six shallow monitoring wells indicate the presence of low levels of zinc (<0.5 mg/l) in all wells and phenols at a 0.03 mg/l level in the monitoring well designated W-1. The fact that the other substances detected in the original sampling were not detected leads to the assumption that many of the contaminants detected during the 1981 FIT sampling have dissipated with time. With the exception of zinc, phenols and methylene chloride there are no similarities between the compounds detected in the site soils and those found in the monitoring wells.

A review of the water quality of the background well as well as that of downgradient wells indicates no significant difference between the compounds found. Given that there is little variation in the values reported for the site monitoring wells and the background water quality, the shallow ground-water migration route is not considered a pathway for transmitting ground water contaminants from the site.

### Deep Aquifer

The results of sampling of eight local domestic wells indicate a few instances of low concentrations of organic and inorganic contaminants. Trace amounts of zinc were found in all wells. Zinc appears to be a common inorganic in the area as it has been found in soils, shallow and deep wells as well as stream sediments.

None of the organic priority pollutants were identified in any of the deep wells sampled. However, three contaminants were identified during the library search, namely siloxanes, hexadienes and 1,2-Benzene Dicarboxylic acid Butyl Methylpropylester. The siloxanes and hexadienes most likely are artifacts of well construction materials being transported by water entering the well as these compounds are common constituents of electrical insulation.

Since there are no similarities between contamination of site soils, shallow ground water, and the deep aquifer (except for zinc), a pathway of contamination to the deeper aquifer from the Friedman property does not appear to exist.

### Surface Water and Sediment Sampling Results

Results of surface water samples indicated zinc at levels which represent background in the area. In addition, methylene chloride was detected in low levels. However, these data are suspect since methylene chloride was also detected in trip blanks. There were no other organic compounds identified in the forward library search of forty non-priority pollutant peaks shown by the mass spectrometer.

Stream sediment analyses indicate that a number of organic and inorganic priority pollutants were detected in sediments on and adjacent to the site. Comparison of the recent data with previous sampling results indicates that a group of polynuclear aromatic hydrocarbons, most likely a result of road maintenance operations, have been trapped in the surface water sediments. The areas of highest concentration appear to be moving downstream, with time. Lead, a common pollutant associated with roadway run-off was also found in stream sediments. Numerous other compounds and concentrations were detected by the forward library search. However, due to either their low concentrations or lack of published toxicity data, there is no indication they pose a significant risk.

Given the low level of zinc detected in the surface water and the fact that methylene chloride was detected at low levels in surface water and also detected in the field blank, it can be concluded that surface water as a pathway is not contributing contaminants to the environment. In addition, although numerous organics and inorganics were present in stream sediments around the site, they appear to be a result of roadway runoff and roadway operations rather than site contamination.

Soil and Waste Sampling Results

Soils and waste materials recovered from borings and test pits contained varying levels of organic and inorganic compounds. These contaminants are considered relatively immobile since they were not detected in the shallow ground-water samples. A number of heavy metals were detected in the soil; however, none of these compounds were found to be present at levels exceeding background.

Although a number of volatiles, base/neutrals and acids were found at levels above background, these excess levels were discovered in a very limited number of samples, thereby indicating a lack of consistent contamination, and possibly reflecting household or small quantities waste disposal. Because this limited contamination has not migrated, there is no significant threat to ground water. Theats related to direct contact and plant uptake are not believed to be significant but land use restriction would be appropriate.

Enforcement

The State of New Jersey and EPA have identified Thiokol Corporation as a potentially responsible party. A Notice Letter was sent to Thiokol on March 18, 1982. This resulted in a meeting with the company on July 7, 1982, to discuss their role in undertaking the site clean up.

Further correspondence resulted in Thiokol submitting two proposals for conducting a modified RI/FS. These proposals were rejected by EPA on January 26, 1983. A second Notice Letter was sent to Thiokol on March 18, 1983, indicating that the State would be responsible for performing the RI/FS.

Alternatives Evaluation

Local public health and environmental concerns as well as NJDEP and EPA requirements, including the National Contingency Plan (NCP), were considered in developing the appropriate response objectives and criteria. For the purposes of identifying levels of permissible exposure, the Suggested No Adverse Response Levels (SNARLS) and the National Interim Primary Drinking Water Standards (NIPDWS) have been reviewed to assess impacts on drinking water.

The Occupational Safety and Health Administration exposure limits for volatile organics have been reviewed to assess air quality. These criteria in conjunction with the NJDEP Interim Hazardous Waste Guidelines were used in developing the appropriate response objectives and criteria for the Friedman Property site.

As discussed above, the site is not resulting in air contamination; ground water contamination levels are essentially at background; and while sediments are contaminated, these levels appear to result from roadway runoff. Finally, within the waste area itself, levels of heavy metals do not exceed background, and (except for methylene chloride, which was found in several samples but did not exceed background significantly) other compounds were found only in scattered samples, generally well below the surface.

Because of the apparent low degree of risk posed by the site, only a limited number of remedial alternatives were considered to determine if any increase in protection was feasible. The following five remedial action alternatives were developed for a detailed analysis of effectiveness and cost:

1. Minimize infiltration - Although the contaminants on site are not migrating into the air, ground water and surface water, additional assurances that migration would not take place could be obtained by regrading, capping and revegetating the site to maximize runoff and prevent erosion and significant infiltration.

2. Removal of waste material - This action would preclude deed restrictions and allow for future use of the property.

3. Deed restrictions - Noting presence of landfill materials and restricting uses that would require excavation (e.g., construction of building foundations.) This alternative would reduce the possibility of direct contact with the low limited contamination remaining on-site.

4. No action - Since there is no evidence that contaminants are migrating from the site or are present at the site at levels representing a significant threat to public health or the environment, the "No Action Alternative" should be considered as a feasible response.

5. Monitoring- Used independently or in conjunction with other alternatives, this alternative would allow NJDEP to review ground water quality, noting any apparent changes, and inspect the site on a regular basis to ensure proper management.

The cost-effective alternative is the lowest cost alternative that is technologically feasible and reliable and which effectively mitigates or minimizes damage to and provides adequate protection of public health, welfare, and the environment.

The alternatives were assessed relative to the following considerations:

- Appropriate treatment and disposal technologies.
- Special engineering considerations.
- Environmental impacts and proposed methods for mitigating any adverse effects.
- Operation, maintenance, and monitoring requirements.
- Off-site disposal needs and transportation plans.
- Temporary storage requirements.
- Safety requirements for remedial implementation.
- How the alternatives could be phased into individual operable units.

The following evaluation of the five remedial action alternatives will consider the effectiveness of each alternative to meet these critical components:

Alternative #1 Minimize Infiltration

Capping is a means of controlling the transport of contamination into the ground water by reducing infiltration. Material of relatively low permeability is placed over the waste deposit, covered with loam and vegetated. The cap would be contoured to promote runoff and the vegetation would promote evaporation and transpiration. This would achieve reductions in percolation of greater than 90 percent.

Further assurances could therefore be provided that any possible leachate generation and future migration of contamination off the site would be prevented. A cap would preclude air emissions, could be rapidly implemented and would have minimal adverse environmental effects resulting from construction. Capping has lower implementation costs when compared with other structural actions (i.e., removal of waste material). The capital cost of this alternative is estimated to be $73,000. This cost is based

on placement of 18 inches of material with low permeability ($1 \times 10^{-7}$cm/sec.). Initial site grading was considered to provide a minimum slope toward the stream and associated wetland, with side slopes of 3 horizontal to 1 vertical.

It should be noted that contamination was found below the water table. If contamination was migrating off site, capping would do little to prevent further contamination. Therefore, such an alternative would have limited the applicability at this site. The alternative would limit use of the land in the future, since the integrity of the cap must be maintained. The feasibility study indicates that there would be little change in concentration at identified receptors compared to the "No-Action" alternative.

Alternative #2 Removal of Waste Material

Waste excavation and removal to a secure landfill represents the most complete remedial action. Contaminated soils would be removed and replaced with clean backfill material. The reduction in volume of contaminants remaining on site would:

1. Minimize the low possibility of any significant contamination migrating from the site.

2. Greatly reduce monitoring requirements.

3. Have no long-term operating or maintenance costs.

Implementation would be very expensive, much more so than capping. Removal operations could produce potential volatile emissions and would require on-site sampling/analysis to optimize removal operations.

The cost was identified for excavating and removing waste material for disposal at a secure landfill, and backfilling with clean borrow obtained from a nearby off-site source. In order to excavate, remove and dispose of an estimated 13,500 cubic yards of waste material and backfill with clean soil material, the total cost is estimated to be $1,450,000. This estimate is based on a $100/yd excavation/disposal cost and $7/yd for obtaining and placing clean backfill.

Alternative #3 Deed Restrictions

The deed notice and plat restrictions would be entered in county land records noting previous use of site and restricting on-site excavations agricultural use and residential use. This alternative would minimize direct exposure to the low levels of contamination remaining on the site. No costs would be associated with this alternative.

Alternative #4 No Action

The principal conclusion that has resulted from the feasibility study is that no remedial action is required to meet OSHA, USEPA, NJDEP air and water quality criteria (See Table 2). Private wells that serve as drinking water supplies have not been affected by waste deposited at the Friedman site. It should be emphasized that the analysis of all data resulting from field investigations has indicated that the contaminants detected at this site will not present significant threat to present or future public health, welfare or the environment.

Alternative #5 Monitoring

The objective of a monitoring program at the Friedman site would be to ensure the early detection of any off-site migration of the low-level contamination remaining on site. This would require that water supply wells downgradient of the site and selected ground water monitoring wells be sampled annually for a five-year period.

Community Relations

A public meeting was held by the NJDEP on October 20, 1983, to discuss the initiation of a Remedial Investigation/Feasibility Study (RI/FS) for the Friedman Property site. Notification of the meeting was accomplished through press releases sent to all newspapers listed in the Friedman Community Relations Plan and mailings to all parties listed in the "Contacts" section of the plan. The meeting was attended by approximately 35 people in addition to the Township Mayor and Council.

A second public meeting was held by NJDEP on July 12, 1984, to discuss the results of the RI/FS. Approximately 30 people attended. The contractor outlined the objectives, scope of work, results and conclusions of the Feasibility Study. He recommended an alternative consisting of the following components:

1. No remedial action

2. Continued monitoring for five years

3. Regrading and reseeding

The meeting was then opened for discussion. A series of comments and questions regarding the site were raised. An in-depth description of both public meetings is included in the attached Responsiveness Summary (Attachment 1).

The Feasibility Study was available for public review and comment for a 30-day period at the county library, township municipal building and NJDEP's Hazardous Site Mitigation Administration office. There were no comments received subsequent to the meeting.

Consistency With Other Environmental Laws

Contamination at the Friedman site appears to result from disposal of domestic/household waste and demolition debris, as well as roadway run-off. There is no reliable evidence to indicate that hazardous wastes, as such, were ever disposed at the site. (The suspicion that such disposal had occured originally triggered the evaluation of the need for remedial action at the site.) In addition, the pattern of contamination found at the site is consistent with that which would generally be found at a site where disposal of domestic/household waste and construction debris, as well as roadway runoff, had occurred (i.e., relatively low, highly variable concentrations of a variety of chemicals).

Given this general makeup of contamination, it would appear to be appropriate to evaluate the site in terms of standards for a solid waste dump, rather than a hazardous waste disposal site. Therefore, RCRA Subtitle D (Open Dump) criteria would be relevant for a determination of what actions are necessary to adequately protect public health and the environment. These criteria would be fully met through the implementation of the actions included within the recommended remedial alternative.

Recommended Alternative

According to 40 CFR Part 300.68(j), the cost-effective remedy is the lowest cost alternative that is technically feasible and reliable and which effectively mitigates and minimizes damages to and provides adequate protection of public health, welfare, and the environment. Evaluation of the five remedial alternatives leads to the conclusion that a remedy which combines alternatives 3,4, and 5, deed restriction, no remedial action and on-site ground water monitoring is appropriate to protect adequately public health, welfare, and the environment.

The results of field investigations have indicated that the low levels of contamination at the Friedman site do not create a substantial danger to present or future public health or the environment. Based on historical information and an on-site air survey, no air quality degradation is occuring under present conditions. The shallow aquifer has no priority pollutant contamination except for low levels of methylene chloride, zinc and phenols, all of which are at or close to background concentrations.

It has been determined that the shallow aquifer is not carrying contaminants from the site. The sampling results of the deep aquifer indicate no contamination except for zinc (a background contaminant) and three non-priority pollutant compounds. The source of the low levels of contamination at the site can be attributed to household trash, demolition debris and roadway run off.

Because the remedial investigation indicates that there is no substantial existing source of contamination or migration of contamination, capping or removal of waste material is not necessary to protect health and the environment. However, monitoring of the shallow aquifer under the site is necessary as a precautionary measure to address the possibility of unexpected off-site migration of hazardous substances. Specifically, the State of New Jersey would be authorized to monitor on-site wells for all priority pollutants plus the forty highest peaks for a five-year period. In addition, although the degree of risk from the site is limited, EPA will recommend to State, county and local officials that, as a further precaution, the deed on the property be restricted as discussed above.

Cost Summary for Recommended Remedial Alternative

The figures listed below represent a cost estimate for the proposed actions. Since the proposed action (monitoring) is considered to be operation and maintenance, cost sharing for project implementation will be 90 percent Federal and 10 percent State for a one-year period. After this time, all monitoring costs will be borne by the State.

| | |
|---|---|
| Monitor Ground Water On-site for Five Years (O&M) | $60,000 ($12,000/yr) |
| Federal Share (90% O&M Cost for One Year) | $10,800 |
| State Share | $49,200 |

Operation and Maintenance (O&M)

The "no-action" alternative in conjunction with ground water monitoring of the site and deed restriction is the recommended remedial action. There are currently six monitoring wells on-site which penetrate the underlying shallow aquifer. These wells will be sampled for priority pollutants annually for a period of five years. The estimated cost for this monitoring is $60,000 The State of New Jersey Department of Environmental Protection has agreed to undertake and finance their share of this effort.

Page retyped for NTIS-July 17, 1985

## KEY TO ILLUSTRATIONS AND ATTACHMENTS

Figure 1 - Regional Location Map

Figure 2 - Vicinity Map

Figure 3 - Local Site Map

Figure 4 - Cross Section of Regional Site Geology

Table 1 - USEPA FIT Data

Table 2 - Remedial Investigation Sampling Results

Attachment 1 - Responsiveness Summary to Friedman Property RI/FS

REGIONAL LOCATION MAP

Figure 1

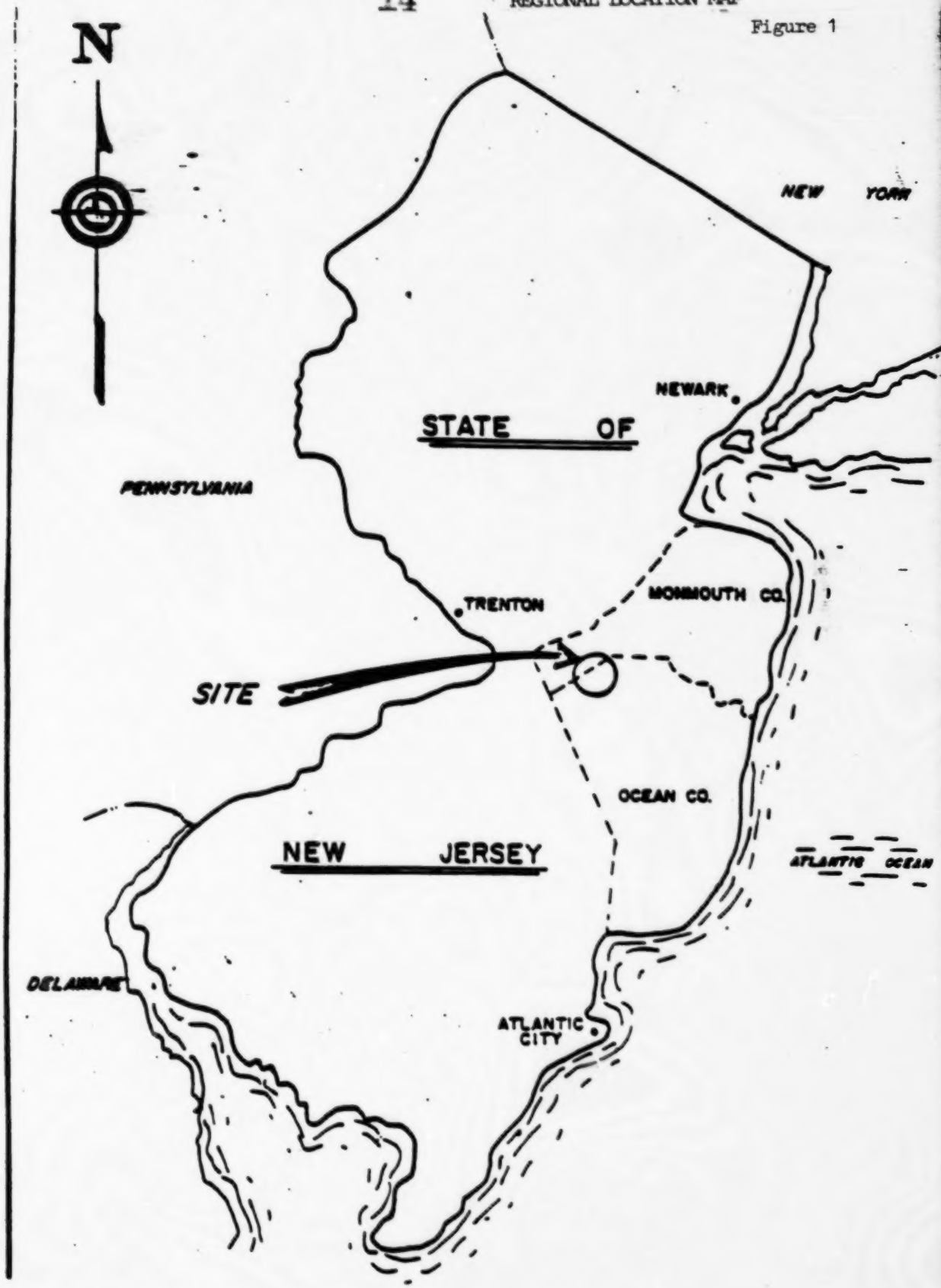


FIGURE 2

VICINITY MAP

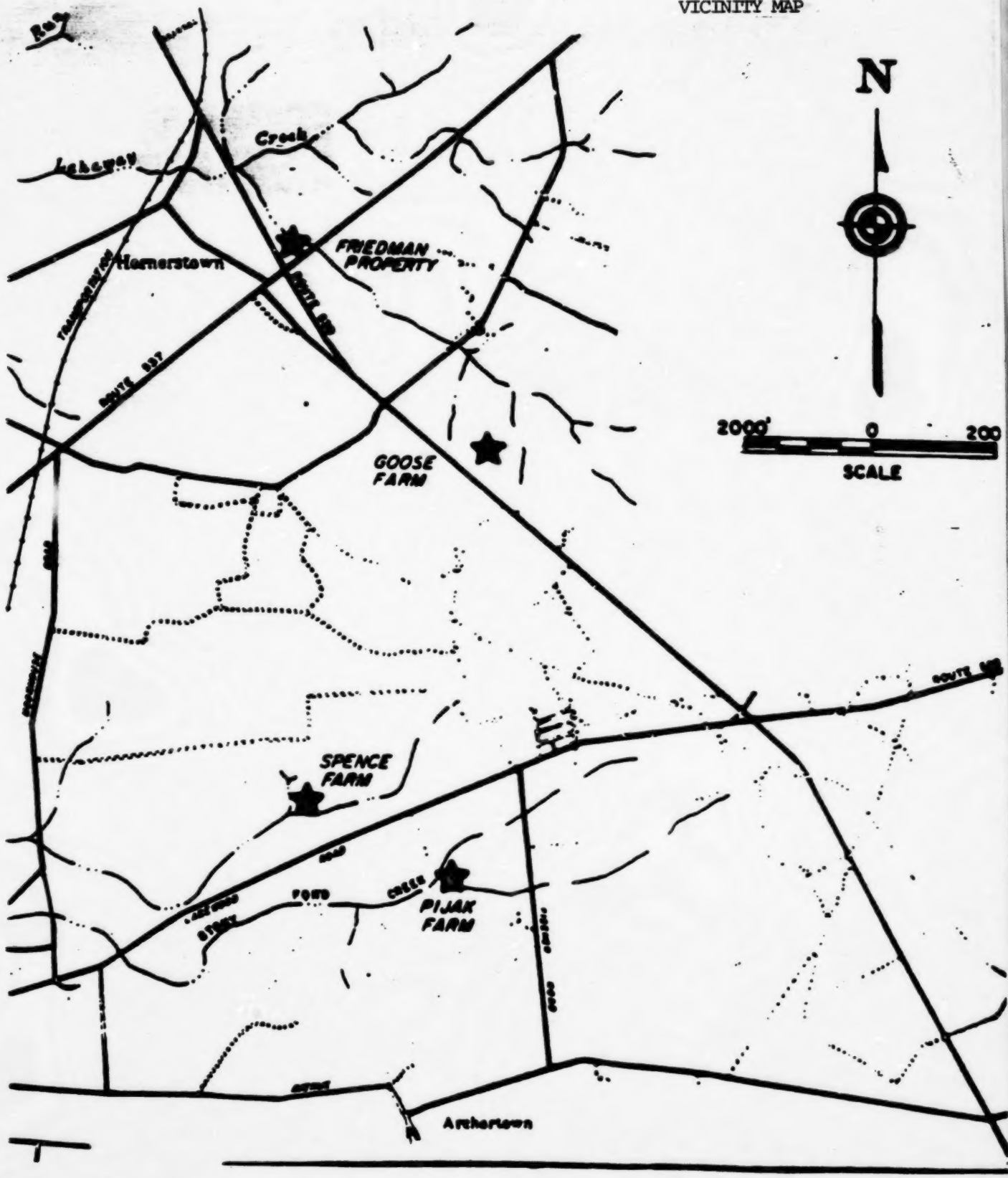
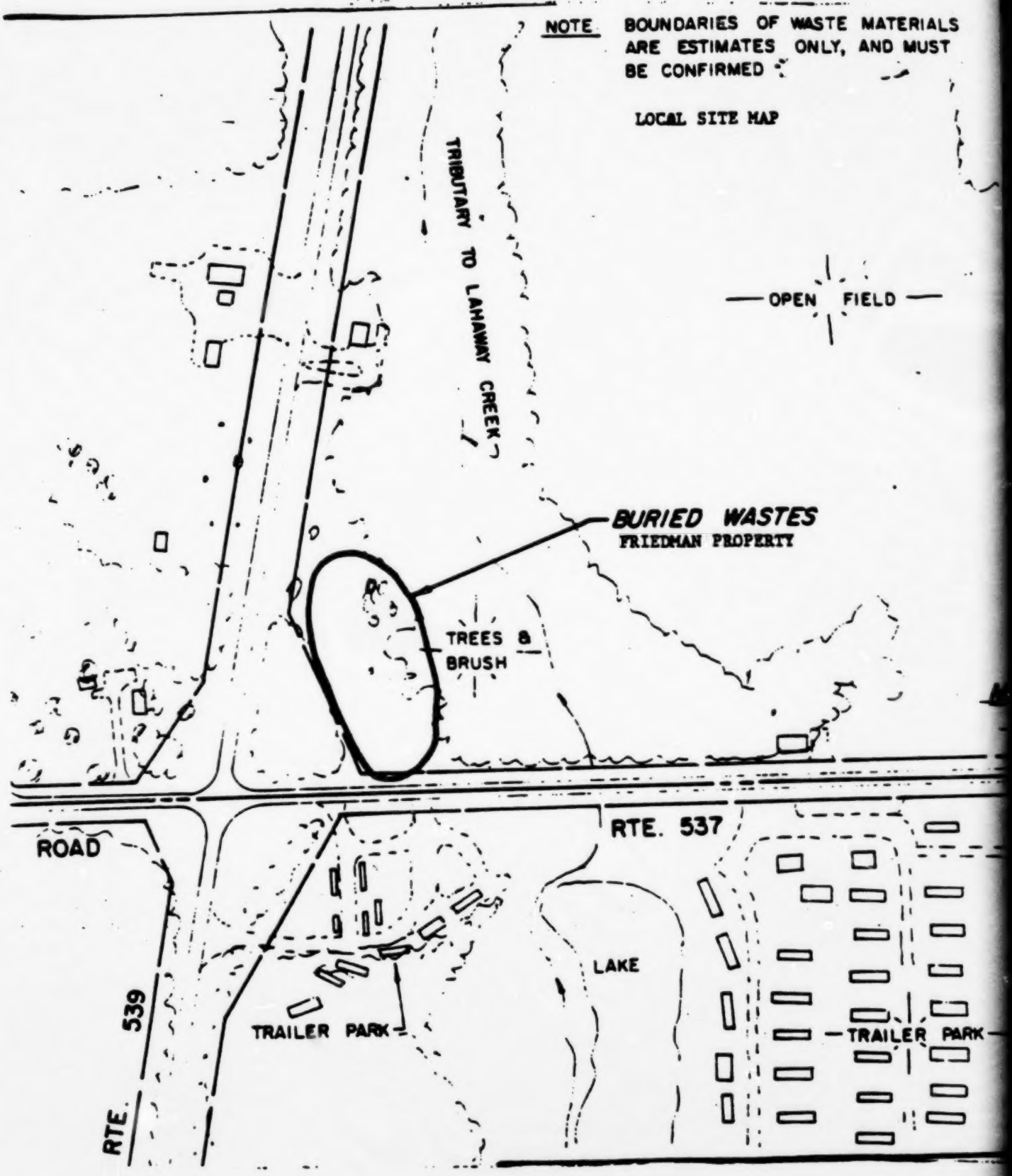


FIGURE 3


NOTE BOUNDARIES OF WASTE MATERIALS ARE ESTIMATES ONLY, AND MUST BE CONFIRMED
LOCAL SITE MAP
TRIBUTARY TO LAHAWAY CREEK
OPEN FIELD
BURIED WASTES
FRIEDMAN PROPERTY
TREES & BRUSH
RTE. 537
ROAD
LAKE
TRAILER PARK
TRAILER PARK
RTE. 539

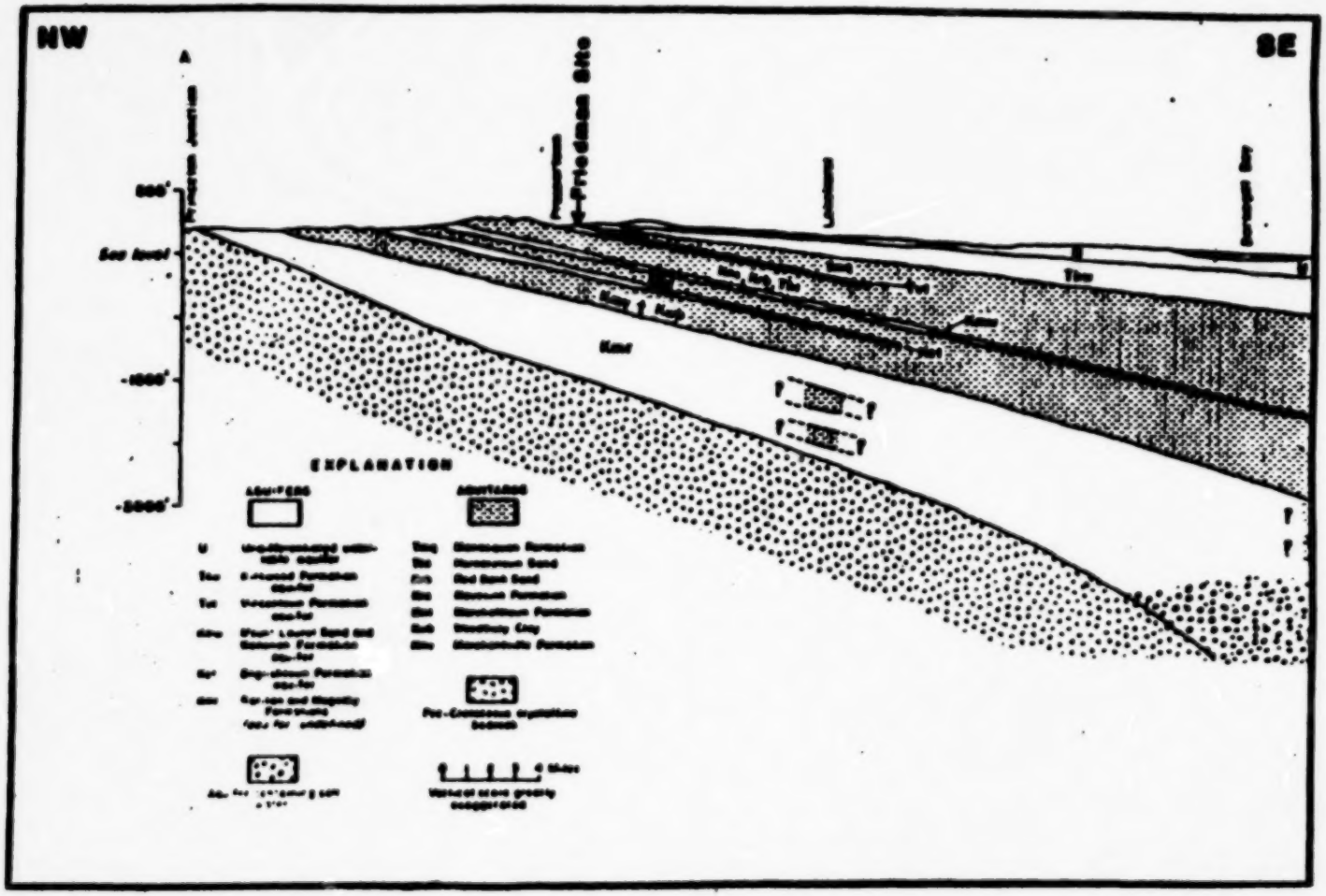



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Figure 4

Cross-section of regional site geology.

# TABLE 1

## GURPA PIT INVESTIGATION OF FRIEDMAN PROPERTY
## DATA REPORTED JULY 7, 1981

| | Sample Station* | Monitoring Wells | | | Stream Water | | Stream Sediments | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 4 | 5 | 6 | 7 | 8 | 9 |
| **Organic Parameters:** | Units | | | | | | | | | | | |
| Bis(2-chloroethoxy)methane | ug/l | - | 41 | - | - | -◊ | | | | | | |
| Pentachlorophenol | ug/l | - | 160 | 220 | - | - | | | | | | |
| 1,2-trans-Dichloroethylene | ug/l | - | 48 | - | - | - | | | | | | |
| Methylene Chloride | ug/l | - | - | - | 18 | 11 | | | | | | |
| Fluoranthene | ug/l | | | | | | 0.4 | - | - | 0.81 | - | 0.9 |
| Bis(2-ethylhexyl)phthalate | ug/l | | | | | | - | - | - | - | 0.3 | 0.4 |
| Benzo(a)pyrene | ug/l | | | | | | - | - | - | 0.8 | - | 0.9 |
| Benzo(b)fluoranthene | ug/l | | | | | | - | - | 0.3 | 0.71 | - | 0.9 |
| Anthracene | ug/l | | | | | | 0.4 | - | 0.2 | 0.97 | - | 0.8 |
| Phenanthrene | ug/l | | | | | | - | - | - | 0.97 | - | 0.8 |
| Fluorene | ug/l | | | | | | - | - | 0.2 | - | - | - |
| Pyrene | ug/l | | | | | | - | - | - | 0.97 | - | 0.8 |
| Methylene Chloride | ug/l | | | | | | - | 0.045 | - | - | 0.81 | 0.82 |

| | Sample Station | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Inorganic Parameters** | Units | | | | | | | | | |
| Chromium | ug/l | 160 | 860 | 320 | 8.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 |
| Beryllium | ug/l | 7.8 | 90 | 3.8 | - | - | - | 3.8 | - | 6.8 |
| Cadmium | ug/l | 8.8 | 21 | 28 | - | - | - | - | - | - |
| Copper | ug/l | 48 | 540 | 61 | - | - | - | - | - | - |
| Lead | ug/l | 170 | 670 | 260 | - | - | - | - | - | - |
| Nickel | ug/l | 48 | 290 | 120 | - | - | - | - | 18 | 18 |
| Zinc | ug/l | 870 | 3700 | 4100 | 38 | 28 | 8 | 18 | 67 | 130 |
| Arsenic | ug/l | 5.5 | 35 | 46 | - | - | - | - | - | - |
| Antimony | ug/l | - | 48 | - | - | - | - | - | - | - |
| Thallium | ug/l | - | 2.8 | 8.7 | - | - | - | - | - | - |
| Mercury | ug/l | - | 2.82 | 8.73 | - | - | - | - | - | - |

* Refer to Figure 1-1 for location relative to the Friedman Property.
◊ - refers to results either not detected or below the detection limit of the method.

## TABLE 2

### DOMESTIC WELL WATER ANALYSES

| | | | | P-1 | P-2 | P-3 | P-4 | P-5 | P-6 | P-7 | P-8 | Drinking Water Standard Primary | Drinking Water Standard Secondary | Detection Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VOLATILES | PP | Methylene Chloride | ug/l | ND | ND | ND | ND | ND | ND | ND | ND | | | 10 ug/l |
| BASE/NEUTRAL* | TIC | Cyclotrisiloxane, Hexamethyl | ug/l | ND | ND | 23 | ND | 19 | ND | ND | ND | | | |
| | TIC | 2,4-Hexadiene | ug/l | ND | ND | 9.5 | ND | ND | ND | ND | ND | | | |
| | TIC | Cyclotetrasiloxane, Octamethyl | ug/l | ND | ND | 17 | ND | 18 | ND | ND | ND | | | |
| | TIC | 1,4-Hexadiene | ug/l | ND | ND | | ND | 5.9 | ND | ND | ND | | | |
| TCDD | | | | ND | ND | ND | ND | ND | ND | ND | ND | | | |
| ACIDS* | TIC | 1,2-Benzenedicarboxylicacid, butyl 1,2-Methylpropylester | ug/l | ND | ND | ND | 17 | ND | ND | ND | ND | | | |
| PESTICIDES, PCB's | | | | ND | ND | ND | ND | ND | ND | ND | ND | | | |
| INORGANICS | PP | Zinc | mg/l | 0.04 | 0.2 | 0.02 | 0.03 | ND | 0.05 | 0.04 | 0.03 | | 5.0 mg/l | .02 mg/l |

PP: Priority Pollutant.
TIC: Tentatively Identified Compound.
ND: Below limit of detection.
*: 1 Base/neutral and 4 acid compounds were detected below 80% purity; therefore they can not be properly identified.

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## TABLE 2

### STREAM SEDIMENT SAMPLE ANALYSES

| | | | | SD-1 | SD-2 | SD-3 | SD-4 | SD-5 | SD-6 | Drinking Water Standard Primary | Drinking Water Standard Secondary | Detection Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PRIORITY POLLUTANTS** | | | | | | | | | | | | |
| BASE/NEUTRAL | PP | 3,4-Benzofluoranthene | µg/kg | 680 | 380 | ND | ND | 200 | ND | | | 10 µg/kg |
| | PP | Benzo(A) Arthracene | µg/kg | 480 | 420 | ND | ND | ND | ND | | | 4000 µg/kg |
| | PP | Benzo(A) Pyrene | µg/kg | 820 | 460 | ND | ND | ND | ND | | | 4000 µg/kg |
| | PP | Benzo(E) Fluoranthene | µg/kg | 460 | 300 | ND | ND | ND | ND | | | 4000 µg/kg |
| | PP | Chrysene | µg/kg | 540 | 540 | ND | ND | ND | ND | | | 4000 µg/kg |
| | PP | Fluoranthene | µg/kg | 240 | 1100 | ND | ND | ND | ND | | | 4000 µg/kg |
| | PP | Phenanthrene | µg/kg | ND | 960 | ND | ND | ND | ND | | | 4000 µg/kg |
| | PP | Pyrene | µg/kg | 300 | 1000 | ND | ND | ND | ND | | | 4000 µg/kg |
| | TIC | Pyrene, 1-Methyl- | µg/kg | ND | 11 | ND | ND | ND | ND | | | 4000 µg/kg |
| | TIC | Pentacosane | µg/kg | ND | ND | ND | ND | 540 | ND | | | 4000 µg/kg |
| | TIC | Cyclotrisiloxane, Hexamethyl | µg/kg | ND | ND | 16 | ND | 540 | ND | | | 4000 µg/kg |
| | TIC | 3,4-Hexadiene | µg/kg | ND | ND | ND | 220 | 240 | ND | | | 4000 µg/kg |
| | TIC | Cyclotetrasiloxane, Octamethyl | µg/kg | ND | ND | ND | ND | 260 | ND | | | 4000 µg/kg |
| | TIC | Cyclohexene | µg/kg | 260 | ND | ND | ND | ND | ND | | | 4000 µg/kg |
| TCDD | | | | ND | ND | ND | ND | ND | ND | | | 4000 µg/kg |
| ACIDS* | TIC | Pentadecenoicacidid-methylmethylester | µg/kg | ND | 270 | 620 | ND | ND | ND | | | 4000 µg/kg |
| PESTICIDES, PCB's | | | | ND | ND | ND | ND | ND | ND | | | 4000 µg/kg |
| INORGANICS | PP | Beryllium | (µg/g) | ND | 1.2 | ND | ND | 0.98 | ND | | | 0.2 (µg/g) |
| | PP | Cadmium | (µg/g) | ND | 2.1 | 1.2 | 2.7 | 0.98 | 1.92 | 1.0 | | 0.2 (µg/g) |
| | PP | Chromium | (µg/g) | 9.3 | 21 | 12 | 16 | 0.1 | 19 | 5.0 | | 1.0 (µg/g) |
| | PP | Copper | (µg/g) | 1.5 | 4.9 | 1.5 | 0.38 | 7.7 | 5 | | 100 | 1.0 (µg/g) |
| | PP | Lead | (µg/g) | 79 | 100 | 13 | 24 | 22 | 61 | 5.0 | | 2.0 (µg/g) |
| | PP | Mercury | (µg/g) | 0.04 | 0.02 | 0.08 | 0.01 | 0.016 | 0.02 | 0.2 | | 0.002 (µg/g) |
| | PP | Nickel | (µg/g) | ND | 3.4 | ND | ND | 2.6 | 1.15 | | | 1.0 (µg/g) |
| | PP | Silver | (µg/g) | 2.9 | ND | ND | ND | ND | 2.28 | | | 0.6 (µg/g) |
| | PP | Zinc | (µg/g) | 0.8 | 41 | 26 | 49 | 48 | 22 | | 500 | |

PP: Priority Pollutant.
TIC: Tentatively Identified Compound.
ND: Below limit of detection.
*: 8 Base/neutral and 5 acid compounds were detected below 80% purity; therefore they can not be properly identified.

TABLE 2

RESULTS OF
SOIL SAMPLES (BORE HOLES AND TRENCHES) ANALYSES

| | | | | W-1 10-12' | W-2 5-7' | W-3 10-12' | W-4 5-7' | W-5 10-12' | W-6 14-19' | W-7 13-15' | W-8 13-15' | † T-2 | †** T-3 | † T-5 | T-7 | T-9 | T-11 | Drinking Water Standards Primary/ Secondary | Detection Limit ug/kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VOLATILES* | PP | Methylene Chloride | ug/kg | 80 | 100 | 160 | ND | 99 | 86 | 210 | 63 | 99 | 1800 | ND | 16 | ND | 270 | | 10 |
| | PP | 1,2-Dichloro Ethane | ug/kg | ND | ND | ND | ND | ND | ND | ND | ND | 13 | ND | ND | ND | ND | ND | | 10 |
| | PP | 1,2-Dichloro Propane | ug/kg | ND | ND | ND | ND | ND | ND | ND | ND | 11 | ND | ND | ND | ND | ND | | 10 |
| | PP | Toluene | ug/kg | ND | ND | ND | ND | ND | ND | ND | ND | 14 | ND | ND | ND | ND | ND | | 10 |
| | PP | Trichloroethylene | ug/kg | ND | ND | ND | ND | ND | ND | ND | ND | 570 | 550 | ND | ND | ND | ND | | |
| | TIC | 1,3-Oxathiolane | ug/kg | ND | ND | ND | ND | ND | ND | ND | ND | 92 | ND | ND | ND | ND | ND | | |
| | TIC | Propane, 1,2,3-Trichloro | ug/kg | ND | ND | ND | ND | ND | ND | ND | ND | 1900 | ND | ND | ND | ND | ND | | |
| | TIC | Carbon Disulfide | ug/kg | 6.9 | ND | ND | ND | ND | ND | 1.8 | ND | ND | ND | ND | ND | ND | ND | | |
| | TIC | 2-Propanone | ug/kg | 7.6 | ND | 51 | ND | ND | 3.5 | 6.5 | ND | ND | ND | ND | ND | ND | ND | | |
| BASE/ NEUTRALS* | PP | BIS(2-Chloro Ethoxy) Methane | u/kg | ND | ND | ND | ND | ND | ND | ND | ND | 4400 | ND | ND | ND | ND | ND | | 4000 |
| | TIC | Acetamide, n-Ethyl-n-Phenyl | ug/kg | ND | ND | 260 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 18 | | |
| | TIC | Ethanol, 2-Butoxy | ug/kg | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 580 | ND | ND | ND | | |
| | TIC | 1,3-Oxathiolane | ug/kg | ND | ND | ND | ND | ND | ND | ND | ND | 320000 | 26000 | ND | ND | ND | ND | | |
| ACIDS* | TIC | 1,2,4-Trithiolane | ug/kg | ND | ND | ND | ND | ND | ND | ND | ND | 23000 | | 410 | ND | ND | ND | | |
| | TIC | Cyclohexane, Chloro- | ug/kg | ND | ND | ND | ND | ND | ND | ND | ND | ND | | ND | 830 | ND | 140 | | |
| | TIC | Cyclotetrasiloxane, Octamethyl | ug/kd | ND | ND | 4500 | ND | ND | ND | ND | 270 | ND | | ND | 20000 | ND | 4200 | | |
| | TIC | Ethanol, 2-(2-Butoxyethoxy) | ug/kg | ND | ND | ND | ND | ND | ND | ND | ND | ND | | 730 | ND | ND | ND | | |
| | TIC | Formic Acid, Cyclohexylester | ug/kg | ND | ND | ND | ND | ND | ND | ND | ND | ND | | ND | ND | ND | 92 | | |
| | TIC | 1,2,4,6-Tetrathiepane | ug/kg | ND | ND | ND | ND | ND | ND | ND | ND | ND | | 21 | ND | ND | ND | | |
| | TIC | 1,3,6-Trioxocane | ug/kg | ND | ND | ND | ND | ND | ND | ND | ND | ND | | 18 | ND | ND | ND | | |
| | | Sulfur Mol. ($S_8$) | ug/kg | ND | 1900 | ND | ND | ND | ND | 780 | ND | ND | | ND | ND | ND | ND | | |
| | TIC | 1,4-Dithiane | ug/kg | ND | ND | ND | ND | ND | ND | ND | ND | 28,000 | | ND | ND | ND | ND | | |
| TCDD | | | | | | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | | |
| PESTICIDES, PCBs | | | | | | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | | |
| INORGANICS | PP | Arsenic | ug/g | 36 | 11 | 27 | 7.8 | 430 | 1.0 | ND | 17 | 4.6 | | 13 | 11 | 11 | 42 | 5.0 ug/g | 0.5ug/g |
| | | Beryllium | ug/g | 1.1 | ND | 2.1 | ND | ND | 0.51 | ND | 1.5 | ND | | ND | ND | ND | 1.4 | | 0.2 |
| | | Cadmium | ug/g | 2.1 | 1.1 | 3.2 | ND | 8.1 | 1.0 | ND | 3.0 | 0.5 | | 1.6 | 0.34 | 0.81 | 2.5 | 1.0 | 0.2 |
| | | Chromium | ug/g | 82 | 52 | 99 | 2.6 | 99 | 14 | 6.4 | 23 | 2.0 | | 5.3 | 3.4 | 3.6 | 170 | 5.0 | 1.0 |
| | | Copper | ug/g | 4.7 | 0.6 | 1.1 | 0.5 | 160 | 1.0 | 2.1 | 15 | 2.0 | | 10 | ND | .81 | 1.8 | 100 | 1.0 |
| | | Lead | ug/g | 13 | 4.5 | 12 | 2.6 | 18 | 3.1 | 2.1 | 6.6 | 5.1 | | 12 | 2.4 | ND | 18 | 5.0 | 2.0 |
| | | Mercury | ug/g | .035 | .020 | .010 | .012 | .010 | .017 | .023 | .012 | .083 | | .014 | .015 | .009 | .012 | 0.2 | 0.00 |

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TABLE 2

SURFACE WATER SAMPLE ANALYSES

| | | | S-1 | S-2 | S-3 | Drinking Water Standard Primary | Drinking Water Standard Secondary | Detection Limit |
|---|---|---|---|---|---|---|---|---|
| VOLATILE PP | Methylene Chloride | ug/l | 13 | ND | 18 | | | 10 ug/l |
| BASE/NEUTRALS* | | | ND | ND | ND | | | |
| TCDD | | | ND | ND | ND | | | |
| ACIDS | | | ND | ND | ND | | | |
| PESTICIDES, PCB | | | ND | ND | ND | | | |
| INORGANICS PP | Zinc | (mg/l) | .03 | ND | .15 | 5.0 mg/l | | 0.02 mg/l |

PP: Priority Pollutant.
ND: Below limit of detection.
*: 1 Base/neutral was detected below 80% purity; therefore they can not be properly identified.

TABLE 2

GROUND WATER SAMPLES
FROM SHALLOW MONITORING WELLS

| | | | | M-1 | M-2 | M-3 | M-4 | M-5 | M-6 | Drinking Water Standard Primary | Drinking Water Standard Secondary | Detection Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VOLATILES | PP | Methylene Chloride | µg/l | ND | ND | 16 | 18 | ND | 11 | | | 10 µg/l |
| BASE/NEUTRALS* | TIC | Cyclotrisiloxane, Hexamethyl | µg/l | ND | ND | ND | 28 | ND | 33 | | | |
| | TIC | 2,4,-Hexadiene | µg/l | ND | ND | ND | ND | ND | 0.5 | | | |
| | TIC | Cyclotetrasiloxane, Octamethyl | µg/l | ND | ND | ND | 8.8 | ND | 38 | | | |
| TCDD | | | | ND | ND | ND | ND | ND | ND | | | |
| ACIDS* | | | | ND | ND | ND | ND | ND | ND | | | |
| PESTICIDES, PCB | | | | ND | ND | ND | ND | ND | ND | | | |
| INORGANICS | PP | Zinc | (mg/l) | .07 | .4 | .5 | .02 | .18 | .02 | 5.0 mg/l | | 0.02 m/l |
| | PP | Phenols | (mg/l) | .03 | ND | ND | ND | ND | ND | | | |

PP: Priority Pollutant.
TIC: Tentatively Identified Compound
ND: Below limit of detection.
*: 2 Base/neutral and 3 acid compound were detected below 80% purity; therefore they can not be properly identified.

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ATTACHMENT 1

Responsiveness Summary:
Completion of Feasibility Study
Friedman Property
Upper Freehold Township
Monmouth County

A public meeting was held by the New Jersey Department of Environmental Protection (NJDEP) on October 20, 1983 to discuss the initiation of a Remedial Investigation/Feasibility Study (RI/FS) for the Friedman Property. Notification of the meeting was accomplished through press releases sent to all newspapers listed in the Friedman Community Relations Plan and mailings to all parties listed in the "Contacts" section of the plan. The meeting was attended by approximately 35 people in addition to the Township Mayor and Council. After the initial presentation by the contractor, the meeting was opened for public discussion. Two questions predominated: 1) Is there a real problem at the site? and 2) Why must the actual cleanup wait until 1985?

With regard to the first question, an investigation of the site was initiated after receipt by NJDEP of signed affidavits stating that toxic wastes had been dumped on the property. The contractor had not found evidence of buried drums by the time of the meeting, but the site was still under investigation; soil and water sample analyses were ongoing.

Discussion led to the second question of why remedial action was such a lengthy process and, specifically, why cleanup of the Friedman Property was scheduled for 1985. The remedial action process was lengthy due to the amount of time required to perform the work following accepted Federal and State standards and procedures. The answer to the second part of this question was that remedial action at this one site needed to be addressed along with the approximately 120 other sites in the NJDEP's Management Plan for hazardous waste site cleanups.

There were no additional comments or questions of major significance generated by this first meeting.

A fact sheet was distributed at the meeting (see Attachment A).

A second public meeting was held by NJDEP on July 12, 1984 to discuss the results of the RI/FS. Approximately 30 people attended (see attendance sheet, Attachment B). The contractor outlined the objectives, scope of work, results and conclusions of the Feasibility Study. He recommended an alternative consisting of the following remedial actions:

1. No action
2. Continued monitoring
3. Regrading and reseeding.

The meeting was then opened for discussion.

One attendee suggested that the term "hazardous waste site" be used with greater discretion because this site was ultimately designated as "non-hazardous." Grace Singer, Community Relations Program Manager and George King, Section Chief, Bureau of Site Management, explained that the site was investigated as part of the group of "Plumsted sites". There were reports and signed affidavits which indicated that hazardous waste could have been dumped there.

A comment was made that regrading/reseeding this private property would be a waste of taxpayer's money.

A resident living adjacent to the site insisted that there was contamination at one time. He said that the site used to catch fire. His children used to watch tanker-trucks come in and pull their plugs. His wife had a kidney removed. In his assessment, the contamination's "been and gone".

One attendee asked for an explanation of the earlier contamination that was detected. He was told that the study attributes this to road maintenance runoff and glues used in well joint couplings. Additional possible explanations are that the earlier, less extensive, sampling and analytical activities were in error, or that contamination detected at that time has since been diluted in the environment.

An attendee asked if the site could be fenced off and barred from use, allowing the property owner, Mr. Friedman, to suffer the consequences. Ms. Singer replied that all comments would be considered, but because the site is now deemed "non-hazardous", there may not be any legitimate reason to erect a fence barring its use.

An attendee commented that there should be no further spending of taxpayer's money at the site.

The Feasibility Study was available for public review and comment for a 30-day period at the County Library, Township municipal building and NJDEP's Hazardous Site Mitigation Administration Building office. There were no comments received subsequent to the meeting.

A handout set including a fact sheet, was distributed at the meeting (see Attachement C).

The NJDEP Record of Decision (ROD) calls for annual ground water monitoring for the next five years. Although the investigation did not reveal the presence of hazardous waste, in order to confirm these results, monitoring will continue. This is an additional precaution taken due to the reported dumping. The ROD also includes a recommendation to the Township that the deed to the property include information regarding the investigation and its results.

TRC Environmental Consultants, Inc.

800 Connecticut Boulevard
East Hartford, Connecticut 06108
(203) 289-8631

ATTACHMENT A

Friedman Site Feasibility Study

October 20, 1983

Upper Freehold Township, New Jersey

I. Objectives

A. Investigate Presence of Hazardous Substances

B. Develop and Evaluate Remedial Alternatives

II. Scope of Work

A. Six Technical Tasks

1. Preinvestigation Activities

a. Health and Safety Plan
b. Sampling Plan
c. Quality Assurance/Quality Control Plans

2. Site Investigation

a. Soil Boring/Sampling
b. Well Installation/Ground Water Sampling
c. Surface Water/Stream Sediment Sampling
d. Domestic Well Sampling
e. Waste Inventory
f. Site Mapping

3. Identify Remedial Alternatives

4. Laboratory and Field Studies

5. Evaluate Alternatives

a. Cost/Cost-Effectiveness Evaluation
b. Recommend Alternatives

6. Conceptual Design and Final Report

B. Status

1. Complete through Site Investigations

2. Awaiting Sample Results

3. Scheduled Final Report in January/February 1984

ATTACHMENT B

N.J. Department of Environmental Protection
Division of Waste Management
Hazardous Site Mitigation Administration
Public Meeting to Discuss the Completion of the Feasibility Study
at the Friedman Property
Upper Freehold Township, Monmouth County
Thursday, July 12, 1984
6:30 p.m.
Upper Freehold Township Municipal Building
Route 539
Cream Ridge, N.J.

| NAME | AFFILIATION | ADDRESS |
|---|---|---|
| Sue Epstein | Star Ledger | |
| Mark D. Wa | ASBURY PARK PRESS | |
| Peggy Chesnut | New Egypt Press | |
| Denise Daltz | Messenger-Press | |
| Edward K. Trimakis | Bd Hamilton NJ | |
| John D Marvin | Holmes Rd, Cream Ridge NJ | |
| Shirley Jacob | Resident Holmes Rd Cream Ridge | |
| Susan Doman | Bd. of Health | U F T |
| Victor Booth | Bd Of Health | U.F.T |
| Joseph A Pinn | Pres. Thomas Inc | |
| Phil Reiff | Health Officer | FT |
| Richard Arbon | Resident | |
| Bruce E Pape | Resident | Holmes Rd Cream Ridge |

| | NAME | AFFILIATION | ADDRESS |
|---|---|---|---|
| 14. | Myron Gilbert | Monmouth County Health Dept | Freehold |
| 15. | Elizabeth Main | Upper Freehold Twp Environmental Commission | Allentown |
| 16. | David A. Main, VMD | " " | Cream Ridge |
| 17. | George King | NJDEP | Upper Freehold Twp. |
| 18. | Dr Richard Dime | NJDEP / HSMA | Trenton NJ |
| 19. | Norman Fillweber | Homeowner | Hwy 32 Cream Ridge |
| 20. | Joseph Holmes | Resident | Cream Ridge |
| 21. | William W Motherhead | Twp Environmental Commission | Cream Ridge |
| 22. | Robert Cottrell | Twp " " | Cream Ridge |
| 23. | | | |
| 24. | | | |
| 25. | | | |
| 26. | | | |
| 27. | | | |
| 28. | | | |
| 29. | | | |
| 30. | | | |

ATTACHMENT C

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF WASTE MANAGEMENT

HAZARDOUS SITE MITIGATION ADMINISTRATION

Public Meeting
on
Feasibility Study Completion
at
Friedman Property

Thursday, July 12, 1984
6:30 p.m.
Upper Freehold Township
Municipal Building
Route 539
Cream Ridge, N.J.

AGENDA

| | | |
|---|---|---|
| 1) | Overview of current situation. Introduction of NJDEP personnel and contractor, TRC Environmental Consultants, Inc. | Ms. Grace L. Singer, Manager Community Relations Program NJDEP |
| 2) | Presentation: Feasibility Study results and recommended alternatives | Mr. William W. Beck, Jr., Project Manager TRC Environmental Consultants, Inc. |
| 3) | Questions and Answers | |

**FACT SHEET**

**Public Meeting**
**on**
**Results of Feasibility Study**
**at**
**Friedman Property**
**Upper Freehold Township**
**Monmouth County**
**July 12, 1984**

**Site Description:** The Friedman Property site is an inactive landfill approximately two acres in size which is located at the intersection of Routes 537 and 539, Upper Freehold Township, across the boundary from Plumsted Township. It is bordered by an unnamed tributary to Lahaway Creek, which is a tributary of the Delaware River. The site was suspected by the New Jersey Department of Environmental Protection (NJDEP) of having accepted hazardous wastes and household trash in the late 1950's to early 1960's. In the spring of 1980, field investigations by NJDEP and the United States Environmental Protection Agency (USEPA) identified contamination in the ground water and surface waters associated with the site.

**Background:** Four monitoring wells were installed at the site by NJDEP in 1980. A Cooperative Agreement between USEPA and NJDEP was signed on September 3, 1982 for the funding of a Feasibility Study at a total cost of $300,000. A Request For Proposal (RFP) was prepared and issued in the spring of 1983. A contract for a Remedial Investigation/Feasibility Study was awarded to TRC Environmental Consultants, Inc. in 1983.

**Status:** The results of TRC's investigation indicate that there have not been significant hazardous waste disposal operations conducted at the Friedman Site. Contaminants present in the the stream sediment samples are attributed to road runoff, not from previous disposal activities. There are minute quantities of both organic and inorganic compounds on site, but these are being contained at the site and do not appear to be migrating in the air, ground water, or surface water pathways. These compounds do not pose substantive danger to the public health or welfare. Direct contact with these compounds or contaminated soils is improbable unless excavations are made at the site in the future.

Over...

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF WASTE MANAGEMENT

HAZARDOUS SITE MITIGATION ADMINISTRATION

## A Community Relations Program at Superfund Hazardous Waste Sites

As part of the federal/state program of cleanup at hazardous waste sites, a Community Relations Program is conducted to receive local input and to advise local residents and officials about the planned remedial actions at the three major stages of the cleanup: 1) remedial investigation/feasibility study, 2) engineering design, and 3) removal/treatment/construction. Local briefings and public meetings are conducted with elected officials and residents and generally take place at:

1) The commencement of a remedial investigation/ feasibility study so that local concerns can be addressed early in the process.

2) The completion of a feasibility study to discuss the alternative courses of remedial action. There is a 30-day comment period after public presentation of the alternatives during which the feasibility study is available in local repositories.

3) The engineering design stage to carry out the mandates of the selected remedial alternative.

4) The commencement of the removal/treatment/ construction stage to advise of the expected physical remedial action.

5) The completion of the remedial action.

In addition to the more formal activities outlined above, there is generally informal communication with local officials and residents. Depending upon whether the New Jersey Department of Environmental Protection (DEP) or the United States Environmental Protection Agency (EPA) has the lead in remedial action at a site, community relations activity is conducted by the relevant State or Federal agency.

In New Jersey, the DEP Community Relations Program is conducted by Grace Singer, Community Relations Program Manager (609) 984-3141/4892. At Region II, EPA, the contact person is Lillian Johnson, Community Relations Coordinator (212) 264-2515.

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## STEPS INVOLVED IN A MAJOR HAZARDOUS WASTE SITE CLEANUP

| | | | |
|---|---|---|---|
| (1) Site Identified and Referred | (2) Initial Site Investigation | (3) Secure Site | (4) Site Analysis Evaluation and Assessment |
| (5) Prioritization | (6) Determination of Lead | (7) Community Relations Plan Activated | (8) Signing of Contract or Cooperative Agreement |
| (9) Hiring of Contractor for Remedial Investigation/Feasibility Study | (10) Preparation of Feasibility Study | (11) Selection of Remedial Action Alternative | (12) Hiring of Contractor for Engineering Design |
| (13) Hiring of Construction/ Removal Cleanup Contractor | (14) Cleanup Evaluation | (15) Contractor Audit and Close out | |